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STATUS OF MIGRATORY GAME BIRDS: 1943-44

Prepared in the Section of Migratory Bird Investigations
Division of Wildlife Research

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INTRODUCTION

The story of the conservation and restoration of the migratory game birds of North America, unfolded during the past decade, should convince the most skeptical that it is possible "to eat your cake and have it too," especially when the "cake" is a living, reproducing thing like a bird population. From an all-time low in the early thirties the waterfowl have increased almost to the full carrying capacity of the environment in the early forties. In recent, wartime years, fewer hunters, and a shortage of ammunition and of transportation facilities, hindered the taking of a normal harvest and permitted local over-populations to develop, which have at times, severely damaged agricultural crops and made control operations necessary.

Such troublesome concentrations bring problems to administrative officers, but to sportsmen, on both the home and the battle fronts, the abundance of ducks and geese brings dreams of relaxation and pleasure in the field during the peaceful days to come.

This leaflet contains a brief account of the results of the migratory gamebird investigations conducted by the Fish and Wildlife Service from the January inventory of 1913 through that of 1944.

PART 1: MIGRATORY WATERFOWL

Spring Migration

According to the migratory game-bird inventory conducted in January 1913, there were about 119,600,000 ducks, geese, and coots on the North American Continent. Migratory studies were somewhat hampered because many former observers are now in the armed forces or engaged in war industries. Nevertheless, enough reports on the 1913 spring movement were received to make possible a reasonably satisfactory comparative analysis, particularly when supplemented by the special reports of the flyway biologists and other Service field personnel.

Of 205 observers, ll6 reported an increase in the numbers of waterfowl in general over those of the preceding spring, 56 could see no change, and 33 believed there was a decrease. On an analysis by species, the pintail showed the largest gain, there being ll5 reports of increase, 70 of no change, and only 20 of decrease.

Because the migratory-bird regulations for 1944-45 permit the inclusion of one wood duck in the daily bag and the possession limits, that species is being closely watched. The 1943 spring reports indicated little change in its status. Both the canvasback and the redhead ducks registered small gains, but the ruddy duck showed a "leveling off" tendency as to numbers. Strangely enough the populations of all species of geese were somewhat reduced, although in most cases the figures were only slightly below those of 1942, and reports of reductions were largely offset by those of "no change".

The Mississippi flyway biologist, who during the winter had been working in the lower Mississippi valley and along the Gulf coast, followed the birds on their northward flight as far as western Minnesota. His report on the status of the different species in that flyway was as follows:

Mallard	No change Increase Slight increase Slight increase	Redhead Canvasback Lesser scaup Ring-necked duck Goldeneye Pudda duck Contact	Slight increase Slight increase No change No change
Green-winged Teal -		Ruddy duck	

Blue-winged teal. - Slight increase
Shoveler. . . - Increase
Pintail . . . - Large decrease
Wood duck . . . - Slight increase

Snow goose . . . - No change
Blue goose . . . - No change
White-fronted goose- Slight increase
Canada goose . . - No change

Attention is called to the "large decrease" reported for the pintail. This decrease was noted by other observers in the Mississippi Flyway, but in the Central and Pacific Flyways, the pintail was the most abundant species and showed the greatest increase over the preceding inventory.

Breeding-Ground Surveys

Canada

For the seventh consecutive year a survey was made of the waterfowl breeding grounds in Nova Scotia, New Brunswick, and Prince Edward Island. Of these three Provinces, New Brunswick probably produces more ducks than the other two, the Portobello Creek section being the most important breeding ground. This and other good breeding areas in the three Provinces were closely observed. Climatic conditions were more favorable to waterfowl than in 1942, and large numbers of young were raised. Black ducks were most abundant and were found throughout the region. Ring-necked ducks were increasing steadily, however, and had become almost as numerous as the black ducks. Both the green-winged and the blue-winged teals were common, and goldeneyes, wood ducks, and pintails were plentiful. The pintail is steadily increasing in numbers in New Brunswick, but definite breeding records are still lacking in the other two Provinces. Canada geese are believed to nest in one or two areas but they have not been found in numbers during the nesting season.

Investigations were made on the marshes bordering James Bay. Although believed to be an important breeding ground for Canada geese, little was known of the waterfowl population of the region. During the course of a six-weeks' study much valuable information was obtained. In the marshes along the south coast it was found that the numbers of breeding ducks were not as great as those on the prairies of western Canada. The breeding population was estimated at 6,000 ducks, of which 56 percent were black ducks, 19 percent were pintails, 11 percent were green-winged teals, 7 percent were baldpates, 2 percent were mallards, and the remaining 5 percent included American and red-breasted mergansers, ring-necked ducks, and American goldeneyes.

Seven broods of black ducks averaged 7 young each, and two broods of green-winged teals averaged 9 each. The Canadian Government has established two refuges totaling about 160 square miles in that area. The taking of waterfowl in the James Bay region is strictly regulated, and the kill by natives is not excessive.

Much important information on waterfowl conditions in Manitoba and Saskatchewan was contained in reports of the Chief Dominion Migratory Bird Officer of the Prairie Provinces furnished the Fish and Wildlife Service by the National Parks Bureau, at Ottawa, and in accounts of the Service's biologist detailed to that

region. In the great Netley Marshes in Manitoba high water washed out the early nests, and a later flood thwarted attempts at nesting. In the Delta marshes, however, where no adverse conditions prevailed, there was a good hatch of redheads, canvasbacks, blue-winged teals, lesser scaups, and shovelers. Also offsetting the losses on the Netley Marshes were gains in the Whitewater Marsh, Oak Lake, and the entire pothole country of the southern and western parts of the Province, where increases in numbers were recorded for all species of waterfowl except the ruddy duck, bufflehead, and redhead. In the Saskatchewan River marshes of The Pas district an improvement was noted in general waterfowl conditions. Probably more waterfowl were produced in Manitoba than for many years.

Through the courtesy of the Royal Canadian Air Force, the Service's biologist was able to fly over a chain of lakes northwest of Moose Jaw, Saskatchewan. Water conditions were good, and large concentrations of waterfowl were seen. During the course of the investigations, Mountain Lake was visited, where more ruddy ducks were noted than at any other place. Some botulism was found on Buffalo Pond Lake, Johnston Lake, and between the Big Arm and Last Mountain Lakes. Leeches were associated with at least one of the outbreaks, but mortality did not appear excessive. Some nest losses had resulted from destructive hail storms and the spring burning of stubble, but as other conditions were favorable it seemed likely that Saskatchewan would produce a good crop of ducks.

Extensive investigations were made in Alberta by the Chief Dominion Migratory Bird Officer of the Prairie Provinces. Water levels and other waterfowl conditions were similar to those in Saskatchewan, and apparently increase in the waterfowl population has kept pace with the improvement in physical conditions. The mallard increased with the greatest rapidity, followed by the pintail, blue-winged teal, shoveler, baldpate, gadwall, and canvasback.

During the latter part of June and all of July 1943 the biologist detailed to the Pacific Flyway worked in the Kamloops district of British Columbia and about Williams Lake, Prince George in the Upper Fraser valley, and the Vernon district of the Okanagan valley. British Columbia is a region of many lakes, sloughs and potholes, and as habitat conditions change little over the years, increases in waterfowl populations may not be clearly evident. Nevertheless, moderate gains appear to have been made by practically all of the species. The mallard is considered most abundant.

Alaska

No unusual conditions were recorded for the vast breeding grounds in Alaska, an area of special interest to sportsmen of the Pacific coast. From banding data it is evident that of the birds that use the Pacific Flyway, the number of those that breed in the prairie regions of the United States and Canada is insignificant compared with that nesting in British Columbia and Alaska. The pintails and widgeons composing the great flights that each year furnish most of the sport in Washington, Oregon, and California are almost all from Alaska.

Newfoundland

During June and part of July 1943, biologists of the Fish and Wildlife Service, in cooperation with officials of the Department of Natural Resources, of Newfoundland, conducted a survey of the avifauna of that island, during which the status of the waterfowl was especially noted. Although general conditions continued favorable, it appeared that the number of ducks and geese annually contributed by that region to the population of the Atlantic Flyway is much less than was formerly thought probable.

United States

Habitat on the breeding grounds on National Wildlife refuges was generally excellent, there being ample water and food supplies. With similar conditions on large areas of non-refuge lands throughout the Great Plains region, wide dispersal of the waterfowl was inevitable. Outbreaks of botulism occurred at several localities in the West, notably on the Bear River marshes in Utah and at Klamath Lake, Oregon. Losses among the waterfowl, however, were not high, and large numbers of birds gathered by salvage crews were treated, cured, and liberated. This disease continues to be one of the major problems on some of the important breeding grounds in both the United States and Canada.

The United States game management agent at Reno made a special investigation of conditions in western Nevada, visiting Washoe Lake, Little Washoe, the Still-water marshes, and Carson, Smith, and Mason valleys. Water conditions were excellent, in most cases with higher levels than at any time during the past 15 years. Vegetation of both food and cover types, also was abundant. The game management agent said that he had personally known the Stillwater Marsh for 20 years and had never seen it in better condition. At that place he found a notable concentration of redheads, which he estimated comprised 40 percent of the entire breeding population of waterfowl on the area. Reproduction from these and other areas in the State was considered satisfactory.

Fall Migration

In many important wildfowling areas sportsmen had a disappointing season. This was due to an exceptionally late fall, so that millions of ducks still lingered on open water in Canada at the time the season was closed in some parts of the United States. The freeze-up then came suddenly, and the birds flew south rapidly, so quickly in fact that in some areas no large flocks were seen at any time during the season. As a result, the reports received from nearly 300 observers were unusually difficult to appraise. This was particularly true for those from the Atlantic and Mississippi Flyways, gross analysis of which, without taking other evidence into consideration, indicated an important decrease of most species. However, as the breeding-ground surveys had shown that the contrary was to be expected, it was felt that little reliance could be placed on the migration reports. In fact, many observers later sent supplementary reports that reversed those originally supplied.

were to the first of dear and the area of the vert to deep for the contract of The Mississippi Flyway biologist was in the field almost constantly during the season and his report shows what happened. At the opening of the season in south-central Minnesota waterfowl were relatively scarce and so remained until November 12, when a very large flight of mallards was noted. Farther west, owing to large numbers of blue-winged teals lingering until October 10, shooting was much better, and in the Plains States generally the late flight was the heaviest in years. Even a heavy snowfall, which in the Dakotas rivaled, the storn of November 11, 1940, did not drive the waterfowl on. Southern Canada had the greatest population of ducks since 1938.

Because of the late and rapid migration, the kill was relatively low in several popular hunting areas. For example, along the Illinois River the bag was reduced about 33 percent compared to that of 1912.

In the Atlantic Flyway, hunting was generally good south to, and including, New Jersey, but from Chesapeake Bay southward the birds were so late in arriving that shooting could be classed only as indifferent to poor. On the other hand, throughout the Central and Pacific Flyways generally, there were heavy flights and the hunting was excellent. In fact, the birds were so abundant in some places, notably California, that crops were heavily damaged and administrative and other corrective action was necessary.

Wintering-Ground Survey

As during the winter of 1942-43, operations were confined to the United States. The Atlantic Flyway biologist covered parts of the southern Atlantic coast; the Mississippi Flyway biologist worked in the lower Mississippi valley; the biologist of the Central Flyway confined his activities to Texas, chiefly coastal areas; and the Pacific Flyway biologist studied conditions mainly in the interior valleys of California.

The outstanding feature of this work was a finding concerning the Canada goose population of the Mississippi Flyway. Excessive kill of these birds at Horseshoe Lake, Ill., if not drastically checked, bids fair to extirpate the flight of these birds. On the basis of a careful study, it was concluded that 21 percent of the Mississippi Flyway Canada goose population was killed during the 1943 hunting season, mostly at Horseshoe Lake. Although all the factors bearing on this kill are not clearly understood, it is obvious that immediate steps must be taken to reduce the bag of geese at this locality.

January Inventory

Because of some seemingly contradictory evidence resulting from the breedingground surveys and the study of the fall migration, the January inventory was awaited with unusual interest. As in the preceding 2 years, the services of many former observers were not available, and this necessitated much "doubling up" by both Federal and State personnel and resulted in lack of coverage for some areas. With the splendid assistance of the Naval Air Service, Coast Guard, Army Air

Forces, and Civil Air Patrol, however, the uncovered districts were reduced to the minimum. The Atlantic Flyway biologist covered extensive sections of the south Atlantic coastal region in personally piloted rented planes.

As the result of the January 19th inventory the continental population of ducks, geese, and coots was estimated at slightly in excess of 125,350,000. As has always been true, first and second places in abundance were held by the mallard and the pintail, respectively. The total population of the mallard is probably between thirty-five and forty millions and that of the pintail in excess of twenty millions. Estimates of the goose populations did not show any important changes from the figures of the 1943 inventory, but a heavy increase was recorded for the coot, of which there is now a continental population nearly equal to that of the pintail.

PART 2: OTHER MIGRATORY GAME BIRDS

Woodcock

A summary of the information contained in numerous reports on the woodcock from practically all parts of its range reveals its status as barely satisfactory. After several years of shortened hunting seasons, this is somewhat disappointing.

Percentage analysis of the spring-migration reports indicated little change in the status of this bird since the preceding spring (table 1).

TABLE 1.—Percentage analyses of the spring-migration reports on the status of the woodcock for the years 1942 and 1943

Year	Status		
	No change	Increase	Decrease
1942	53	23	24
1913	51	27	25

The Atlantic Flyway biologist made his seventh consecutive investigation of this bird in the Maritime Provinces of Canada, studying 6 woodcock singing grounds in New Brunswick, 4 on Prince Edward Island, and 2 in Nova Scotia. Censuses taken on these areas generally showed a slight decrease from 1942 with a large decrease in the Moncton, N. B., area, which in former years was the area of greatest concentration. The Dominion Chief Migratory Bird Officer for Ontario and Quebec, now Superintendent, Wildlife Protection, National Parks Bureau, who surveyed areas in Ontario, reported the population "substantially the same as in 1942."

The eighth consecutive report for eastern Maine by the biologist of the Maine Cooperative Wildlife Research Unit also showed some reduction in breeding pairs as compared with the population of 1942. This also was true in Pennsylvania according to a report submitted by the acting leader of the Cooperative Wildlife Research Unit that covered two areas which have been surveyed regularly since 1939 and 1940.

Following the fall migration and hunting season, reports on the woodcock were received from Canadian migratory bird officers and ornithologists, some of which indicated local conditions that were almost alarming. One of these men, an enthusiastic hunter, wrote, "I am more convinced than ever that these birds are slipping from year to year and this year in my opinion they reached their all time low." The kill in the Maritimes Provinces was definitely below normal.

The compiler of this report spent two days hunting woodcock in Pennsylvania with officials of the State Game Commission. The woods were "tinder dry", and although the party was aided by dogs famous for their ability to find woodcock, only five birds were taken and probably twice that number flushed.

The flyway biologist reporting on the wintering grounds in southwestern Louisiana, however, contributed the brightest bit to the year's picture of this bird. He "found woodcock more abundant than in the famed woodcock coverts along the Connecticut Valley in New England." He added, "There probably has been a slight increase." In wintering areas, however, some concentration is to be expected.

Wilson's Snipe

For the first time in several years the population status of Wilson's Snipe showed a slight improvement. The change was not great, but it was definitely on the credit side of the ledger. Only time will tell whether or not this will continue. Percentage analyses of the 19½ and 19½ spring-migration reports are shown in table 2.

TABLE 2.—Percentage analyses of the spring-migration reports on the status of Wilson's snipe for the years 1942 and 1943

Year	Status		
	No change	Increase	Decrease
1942	56	18	26
191/3	61	21	18

As a result of work during the spring and summer, the Atlantic flyway biologist's report on this bird was: Heard fairly commonly in certain good habitats throughout the Maritimes Provinces, but the species is definitely less common than it was several years ago. This reduction in numbers is not accounted for, but it has been clearly noted during field work each spring and summer in these Provinces.

The Mississippi Flyway biologist making observations in the marshes bordering the south and east coasts of James Bay, also found these birds in only fair numbers. Population figures for that region from past years are not available for comparison. This same observer working during the fall and winter in Louisiana reported that jacksnipes were not evenly distributed. In the southwestern part of the State, in an ideal snipe marsh, very few could be found, whereas they were abundantly noted in certain areas in southeastern Louisiana. On his way south in October, he had found them numerous also in north-central Iowa, and had reports of abundance in the Arkansas rice country.

In the Delta region of Manitoba a decrease was reported.

Analysis of all reports received for the fall migration again showed a favorable balance, although not so marked as was that for the spring movement.

Rails and Coots

But little additional information has been obtained on the status of the different species of rails. With improved ecological conditions along the coastal and interior marshes, there is every reason to believe that there has been a general numerical increase.

The coot continues to increase and its management may become a serious problem. Sportsmen would help if they would add some of these birds to their bags. Properly prepared they are a good table bird. Directions for cooking coots may be obtained from the Fish and Wildlife Service, Chicago 54, Ill.

Mourning Dove

Reports on the 19¹/₃ spring migration of mourning doves indicated a gratifying improvement in numerical status. Of 17¹/₂ reports, 90 recorded no change, 66 an increase, and only 18 a decrease. Considering the dangerously low point in the population of this species only 3 years ago, this is considered as indicating a most satisfactory recovery toward normal numbers.

During the fall, a special investigation was made in the Southeastern States, by the biologist of the Atlantic Flyway, followed by a similar study in midwinter by the biologist in charge of the unit. The results of these and other studies showed that the mourning dove had experienced another good breeding season and that shortage of ammunition and other war-induced causes had resulted in a very light kill despite the fact that the regulations had been amended to permit increased hunting later in the season.

White-winged Dove

The most important finding of the investigations of the white-winged dove conducted in southern Texas by the Central Flyway biologist was the discovery of a northward extension of the breading range. Owing to the progressive destruction of habitat in the lower Ric Grande valley, this may be of great importance to the welfare of the species. Information is now believed sufficiently adequate to work out a sound management policy for the whitewing, although a few gaps in knowledge remain to be filled.

Band-tailed Pigeon

The last issue in this series (Wildlife Leaflet 250, p. 11) noted a Forest Service report from the Denver regional office to the effect that this bird was increasing in Colorado. During the year a United States game management agent made observations in mountainous parts of the State that appear to substantiate fully the earlier account. Present information indicated a State population of several thousands of these pigeons.

Summary of 1944 Operations

To bring this report as nearly up to date as possible it may be recorded that the usual study was made in 1944 of the spring migration, and the biologists of the Atlentic and Mississippi Flyways are at this writing (September 1944) concluding operations in Canada; the biologist of the Central Flyway has continued his work in southern Texas; and the biologist of the Pacific Flyway has made extensive investigations in the waterfowl breeding grounds of the Great Basin and the Pacific coast.

In general, their reports are favorable, and it is believed that the fall flight of ducks and geose will be the largest in a generation. There are, however, a few disturbing features. From Canadian sources come accounts of disastrous fires in the Northwest Territories that may have caused losses. Also in the Great Plains region, many excellent breeding grounds were sparsely inhabited. American coots are overabundant. Reports from the breeding grounds indicate further increases in mourning doves, but the status of the woodcock seems little changed. A further slight numerical gain for Wilson's snipe has been recorded.